

## Analyzing Curriculum Resources for Instructional Purposes

### Overview:

As a teacher, one of your tasks will be to plan instruction that addresses the “big ideas” in science as expressed in either the national or state standards documents. An important step in this process is to analyze and make judgments on the strengths and weaknesses of available curriculum resources and plan lessons that provide your students with opportunities to meet your learning goals. As a teacher you will consistently need to ask: Is that the best representation to get the idea across? Are these phenomena the most appropriate?

In this assignment, you will unpack a learning goal expressed in national and state standards as we have discussed and done in class. You will then choose a part (subtopic) of this learning goal and analyze for instructional purposes either a section of a textbook or another type of curriculum resource using a subset of the Project 2061 evaluation criteria. Finally, you will describe some experiences you would plan for your students based on this evaluation.

### The Assignment

Your analysis of instructional resources should include the following components:

#### Part 1: Describe the materials you plan to evaluate.

Title, publisher, date of publication, Authors, Specific Subject, Grade, Age, Target Ability Levels, and Chapter Title

#### Part 2: Select and unpack a learning goal

Select a learning goal from either the *Benchmarks*, the *Standard* that is also represented in Rhode Island’s *Grade Span Expectations*, and “unpack” it by answering the following questions: 1) What does the standard mean? 2) What prior knowledge do students need to understand the standard?, and 3) What misconceptions might students have around the topics contained in the standard? For instance, you might select the learning goal, Natural Selection, High School Benchmark 5F:3,9-12 (page 125 of *Benchmarks*). For this part of the assignment, you may collaborate with one or two of your classmates working in the same discipline.

#### Part 3. Analyze selected features of the materials

Use three of the criteria developed by Project 2061 to determine if the materials will help students develop an understanding of the specified benchmark/standard. If you are analyzing a textbook series that spans a year, select a unit or chapter that addresses a specific topic you determined was necessary in order to understand the overall learning goal. For example, if the standard talks about students’ understandings of linear, circular, and projectile motion, then you can choose *one* of these sub-topics if the text you are analyzing has separate chapters for each topic. *You should not evaluate more than one chapter of your text.*

You will make judgments on the Categories and Criterion listed below. These are explained on the Project 2061 website, and will be discussed in class.

#### Category III: Engaging Students with Relevant Phenomena

- Criterion III.A: Providing a Variety of Phenomena
- Criterion III.B: Providing Vivid Experiences

#### Category IV: Developing and Using Scientific Ideas

- Criterion IV.B: Representing Ideas Effectively.

**For each criterion, you should do the following:**

***Identify the sightings where the topic is dealt with.***

Carefully examine the materials to identify the sightings where the topic you are concerned with is dealt with either through a representation or a phenomenon.

***For each sighting, determine if the criterion is met (criterion and categories are described on the web\*)***

The next step in the analysis requires that you determine if a sighting satisfies each criterion. List all the sightings that pertain to a criterion. For each sighting use the list of indicators to determine if the criterion is met, questionable, not met or doesn't apply. Write a short justification using the indicators.

#### **Part 4. Apply your evaluation to think about your teaching.**

After you have analyzed the phenomena called for by your curriculum or text as well as the representations used to describe the topic you chose, prepare to plan instruction by describing:

- Phenomena, representations, and experiences that you think should be included in **one lesson** addressing this topic.
- How you will have your students use their text in conjunction with your lesson to understand the topic you have chosen.

#### **Suggested Curriculum Resources**

The curriculum material that teachers have to use varies widely. These can range from reform-rich curriculum guides with student readers to a stack of textbooks that no longer include the accompanying teachers guide. Some districts have curriculum guides specific to particular courses.

Since the purpose of this activity is for you to examine a teaching resource and think about how you might have to teach using them, you should try to evaluate a text or curriculum guide for a course you want to teach. If you decide to evaluate a textbook, you should also try to examine the accompanying teacher's guide or the teacher's edition of the text, since these resources will include suggested laboratory activities, demonstrations, etc.